

THE
MASSACHUSETTS TEACHER.

OCTOBER, 1859.

Volume XII. PROF. WM. RUSSELL, Editor for this month. Number 10.

NATURAL HISTORY IN CONNECTION WITH EARLY EDUCATION.

[THE generous offer of Professor Agassiz, to afford free opportunities of study and instruction to the teachers of the public schools of our State who desire to obtain such advantages, has repeatedly called forth the warmest acknowledgements of the kind intentions of our distinguished naturalist; and the editor of the present number of the *Massachusetts Teacher* thinks he can in no way better discharge the duty devolving on him than by inserting anew, in the pages of this journal, the following article. Some of our readers will, of course, at once recognize it as that which appeared originally, in our number for January, 1850, in which Professor Agassiz, with his wonted disinterestedness, acted as a member of the board of editors for the year. To many, however, who have but recently become readers of the *Teacher*, and who have not become possessed of our earlier numbers, nothing, we think, could be presented better adapted to promote their professional usefulness or their personal enjoyment.

The claims of natural history, as an important branch of early education, cover the whole ground of human culture — physical, intellectual, moral, spiritual, and practical. The study of nature brings the child into the open air, invigorates, inspires, and delights him; opens lungs, heart, brain, soul, and limbs to their divinely appointed influences, and impels them to their intended operations; quickens, and sharpens, and incites the intellect; mingles the social sympathies in the pleasures of a common pursuit; cherishes the spirit of a generous liberality in the giving and receiving of specimens of value; leads both mind and heart upward to the All-creator; and by the habits of order and classification, of neat arrangement and careful conservation, to which it necessarily leads, it favors the formation of all those traits of character which tend to make the individual a practical and efficient person in the affairs of actual life. No department of education so happily meets the irrepressible desire of childhood for something to do, something to see or hear, something to handle, something to work with, — something, in a word, to grow by mentally and bodily. The experienced teacher can testify that when he is so happy as to have youth early trained on nature committed to his care, his task of

guidance is easy and pleasant, because he has to do with pupils who have already acquired the use and meaning of their own faculties. No mental discipline is so effectual as that which the studious observation of nature gives, even to the youngest child: the grand processes of analysis and classification are, in such instances already familiar exercises.

But to return to our immediate purpose. An important object in view in introducing the following article a second time in our pages, is to remind our fellow teachers how they may, personally and individually, acknowledge the liberality of Professor Agassiz, by entering zealously and efficiently into his suggestion regarding local collections and school cabinets. The inviting days of October, let us hope, will not have, this year, passed away without having contributed, in many instances to the incipient formation of school collections of specimens of our common minerals.* W. R.]

IMPORTANCE OF THE STUDY OF NATURAL HISTORY AS A BRANCH OF ELEMENTARY EDUCATION.

"It is a strange feature in the education of mankind, which we may trace back to all ages of our history, that the study of Nature has never been made an essential part in the early education of children. The cause of this neglect appears the more surprising when we reflect that man lives in Nature, everywhere surrounded by so many interesting phenomena, which should at all times call his attention. However, the difficulty of understanding the complicated appearances and the extraordinary diversity of things which present themselves naturally to our attention, have, no doubt, been the chief causes of this neglect, and perhaps also the circumstance, that constantly surrounded by these phenomena, they become familiar to us, and lose, in a measure, their attraction before we have been led into an investigation of them; and those who afterward were led to devote their attention to this study, finding it as intricate as it is attractive, must have considered the study of Nature beyond the reach of early years.

"Again, there are in human nature so many calls for a more direct education of the faculties with which man is endowed, that the attention of parents is early and constantly called to this object, rather than to a development in other directions. The necessity of teaching the children to speak, and to speak correctly, leads early rather to the use of books as records of the thoughts, ex-

* The new work, "Geology for Teachers, Classes, and Private Students, by Sanborn Tenney, A. M., Lecturer to the Massachusetts Teachers' Institutes," will be found a valuable manual for the above purposes.

pressed in the form of speech, than to the study of natural phenomena. There are, however, sufficient reasons why the study of Nature should not be neglected, and indeed enough why in the present state of knowledge, the study of Natural science may be made the real foundation of all education. It is a peculiarity, with which I have often been struck, that nothing is done in the education of children to develop their organs of sense, to teach them to make the best use, and a full use of their eyes and fingers; and, unless they show a disposition for music, their power of distinguishing sounds and appreciating harmony is never developed. As for an education of the organs of taste and smell, there is no care taken under any circumstances, to teach children to distinguish between the fragrance and taste of different substances.

“It is nevertheless obvious that much might be done in this respect. And without attempting too much at a time, let us for a moment consider how much more might be done, than is usually the case in the way of developing the senses of seeing and feeling.

“Those who have been conversant with the use of magnifying glasses, who, from professional inducements, have been led to practise their eyes and fingers, know how imperfectly most men are prepared to look at minute objects; how incorrectly they appreciate distances or the relative proportions of objects in the distance, or even near them, and how roughly they handle every thing they touch. If it were only to teach a more proper use of these organs, the study of Natural History might be advantageously introduced into the elementary schools. But there are other and higher reasons why such a study should be introduced into every liberal system of education. Without alluding to the extensive use which a knowledge of Natural objects might have for every man in common life; without alluding to the benefits to be derived for our comforts, from a more extensive acquaintance with Natural productions; without alluding to the sources of wealth accumulated everywhere in the soil around us; without alluding to the improvements which a better knowledge of these things might introduce in our husbandry, and in the transactions of life, there is one point of view which should make the study of Natural History an object of no small importance in the education of every human being. It is its moral influence upon us; it is the fact, that unless

we study Nature extensively, we remain almost strangers to the wonders of the Universe ; we remain unconscious of the beautiful harmony there is in Creation ; we fail to perceive distinctly that there is in Nature a revelation of the *Supremè Intelligence*, which teaches us that every thing has been done with order, with a view to a plan, and with reference to the creation of that privileged being to whom God has revealed himself in another manner ; it is the fact that the revelation of God in Nature, the manifold manifestation of his power, his wisdom, his intelligence, which are displayed throughout Nature, remain a sealed book to those who are not early taught to read it, or they remain as a sort of undeciphered hieroglyphics, which man may easily misinterpret from want of sufficient knowledge of the characters in which they are written.

“ The study of Nature is worthy of our attention in this respect ; and its importance in this point of view is as great as that of any other branch of study.

“ Whoever reflects upon this subject in this view cannot fail to acknowledge the value of such a study, and may perhaps only object on the ground of insuperable difficulties in teaching children what may be said to be as yet so little understood even by professed naturalists ; but as languages can be taught without going back to their origin, and without alluding particularly to their mutual relations ; as the elements of arithmetic and geometry may be understood without a deeper study of the higher Mathematics ; as the art of writing or of using the pencil may be imparted to those who shall never be original writers or distinguished artists, so with equal ease and facility, can a knowledge of natural things be acquired within limits which are common to all ages, to all wants, in all circumstances of life ; and just such a study of Natural History would I advocate as a part of the elementary education in common schools.

“ The study of the natural methods of classification and more extensive investigations of complicated phenomena, the use of the microscope and dissecting apparatus, may be introduced at a later period ; but, unless children be prepared for this higher study, — unless they acquire a certain familiarity with the external relations of Minerals, Plants, and Animals, it will be as impossible to instruct

them further in the higher branches of these Sciences, as it would be to teach mathematical astronomy or natural philosophy to those who had never learned to add and subtract figures, or to obtain the simplest written statement from those who had never learned their A B C.

“This elementary study should be substantial, and should consist in the illustration of material objects, the properties, forms, and characters of which, might be explained, even by those who are not yet familiar with the subject, but who, from a more mature development of their intelligence, should always be prepared to describe correctly, what is brought before them. The facility with which we can call the attention of children to phenomena with which we ourselves are but slightly familiar, without giving full explanations of what is seen, shows the ease with which such elementary instruction in Natural History might be introduced in all schools by every intelligent teacher. There can be, therefore, no objection to such a plan, on the ground of the difficulty of the subject; and perhaps some details about the plan to be pursued, will convince the most incredulous.

“Suppose the subject of animals was first introduced. I should decidedly avoid speaking first of classification, natural arrangement, or systematic nomenclature. Such points of Natural History have nothing to do with the elementary instruction, which should be imparted in schools. But let the figure of a quadruped be suspended before the blackboard, or a stuffed specimen be introduced, or, in want of both, a living animal, a dog, be mentioned, and the teacher may, to the greatest amusement of his young pupils, and to their still greater instruction, call their attention to the divisions of the body, — show how such animals have a head like us, have a neck like us, have a chest and belly like us, have four limbs like us; and so, at the outset, destroy a prejudice so universally circulated among men, as if our race were something quite peculiar in nature, entirely unconnected with the animal creation; while, on the contrary, the resemblance is very close. The comparison may be carried into almost endless details; when it could be shown, how, in the head, the same parts occur in the same relative position, showing a mouth with teeth, the jaws moving up and down, a nose with nostrils, eyes with eyelids, and lashes in the fore part of the

head, ears on the sides of the head ; but, at the same time that these resemblances are pointed out, how easily might not the attention be directed to the nobler form of the human profile ? the elevated position of the head upon an erect body be mentioned. The power of moving the head in all directions, looking always forward and upward ? How easily might a comparison between the fore legs and arms be instituted, mentioning the position of the shoulder-blade, the elbow, the wrist, — the complication of the hand, with its five fingers, one of which, the thumb, is distinctly movable in opposition to the other fingers ; a peculiarity, which gives to the human hand its great superiority over the foot of all quadrupeds, as an organ of touch ; the ease with which the arm may be moved in all directions, forwards, backwards, upwards, downwards, while in quadrupeds it moves only in two, either forwards and backwards, as in those that run, or up and down, as in those that fly or swim ? The legs might be compared with the hind legs of quadrupeds, and the articulations of the hip, the knee, the heel, the toes, be noticed, and compared with those of the arm or fore leg. Then, again, a comparison might be introduced between the attitude in which man walks and that of quadrupeds ; when it could be shown that the power with which man is endowed to stand on two legs with perfect firmness, gives him two limbs to use, in addition, for most diversified purposes. So that we owe all the benefit derived from the use of our arms and hands, and the superiority this gives us over quadrupeds, simply to the circumstance of our walking upright, while quadrupeds move on all fours.

“It will be easy to perceive how such illustrations may be carried on very far with a little skill and intelligence ; how the external differences in form, size, proportions, color, etc., which characterize our domestic animals, may be made the subject of interesting illustrations, which would be always referred to natural objects, these animals being within the reach of every body everywhere.

“Next, some wild animals might be compared ; some which differ more from those with which we are familiar, and their peculiarities be explained in the same manner. Suppose, for instance, a Bat was brought to school one day, how unexpectedly would it strike the young people, to be shown that their wings are

only modified arms? That they have the same joints, that they are placed in the same position, and that they have only much longer fingers, which, instead of being free, are united by a skin extending from one to the other, and uniting at the same time the hind legs with the wings. The resemblance of Bats to other quadrupeds, would appear still stronger if it were mentioned that these animals bring forth living young, and nurse them with milk in early life, as all other higher quadrupeds do. And no sooner had it been understood in what sort of relation the Bat stands to other quadrupeds, than the children would be prepared for any further generalizations. For, when they had been impressed with the conviction that the same organs may assume widely different forms; that what is an arm with a skilful hand in man, may be a clumsy foot in a cow, and terminate with a single finger and hoof in a horse, or assume the shape of a wing in a bat. The comparison of the nose in various animals would lead them to understand that the elegantly proportioned form of this organ in the human race, assumes the beastly appearance of the snout of the Hog, or becomes the exceedingly sensitive organ of scent in the Dog, or be transformed into a long proboscis, used like a hand, in the Elephant; for the proboscis of the Elephant is only a prolonged nose, movable to a most remarkable extent.

“Endless comparisons of the kind may suggest themselves to the teacher; and even should they not be always correct, there will be no greater harm in this than there is in the incorrect views taken by all teachers on all those subjects upon which we do not yet, for the present, possess sufficient information, but which time and the progress of the Age will throw more light upon.

“Suppose now a Bird be introduced, (and I should wish that such exhibitions might be always made from natural specimens,) a Hen in a cage, from its size, and our familiarity with it, and the ease with which we may have access to it, and see it every day, would be, in my opinion, far preferable for the instruction of the young, to the most wonderful Parrots and Colibris of the tropics, or any of those curious foreign Birds, the history of which fills our Elementary Books on Natural History, though the birds themselves may never be seen by those who learn it. Let, therefore, a domestic fowl be introduced. The first impression will be that of a being

entirely different from the quadruped, examined before ; for here we have only two legs, and two wings, the animal standing upright upon its legs, and moving its head gracefully upon a long neck, the whole of the body clothed with feathers, excepting the bill, which is covered with a horny sheath, and the feet, the fingers of which are more or less scaly, and provided with claws at the end. After pointing out these prominent differences between birds and quadrupeds, how easily might not the attention be called to the resemblances between them ; when it might be shown that both have a head, and neck, chest, abdomen, and limbs ; that in the head there are equally a mouth, eyes, nostrils, ears, and that to see these latter two organs we need only to look carefully at the base of the bill, or between the feathers on the side of the head ; and this comparison will doubtless widely increase the interest of the pupils for such studies, especially if the teacher is ready to make some allusion to the uniformity which prevails in the laws governing the animal Creation ; if he is capable of showing how a wise Creator modified in different animals the same organs to suit different circumstances, giving a wide ear with a broad funnel to those animals which live in open plains, where the sounds are easily lost ; reducing it to a small cavity in the soaring inhabitants of the woods and rocks, where every sound is echoed an hundred fold by the irregular surface of the soil. Presently, the comparison of the wings of Birds with those of Bats, may be taken up, and traced further to the fore legs of quadrupeds, and even to the arms of man. Next, the legs may be traced in the same way, and the uniformity of arrangement of parts in such remarkably different animals, may be made quite entertaining. Presently, also, the teacher may add, that Birds lay eggs, set upon them for a time, before the young are hatched, that they do not nurse them with milk, but feed them with the bill, and provide, in various ways, for their subsistence, leading them in the field to seek for food, and so on. Speak of the great diversity of Birds in every country, mention their annual migrations in Spring and Fall, and all those interesting details in the Natural History of Birds which may be found in every work on Ornithology.

“ Also the uses of Animals and Birds to man may be spoken of ; the history of such animals as are particularly important in trade,

such as the fur animals, the seals, the whales, the various wild animals.

“ It is also prudent to begin the study of Natural History with such animals as are familiar to the children, both to avoid exciting any anxiety or fear, which the sight of the unknown animal may produce, and to increase their curiosity by telling them, as much as possible, of new things respecting objects which they suppose themselves to know so well. Such a circumstance frequently repeated will be the greatest inducement for constant inquiry into the things around them. But though pleasant objects should be made subservient to these general very important purposes, it were injudicious to avoid speaking of those things which are frightful, injurious, and even dangerous, to man ; and upon these, the most precise information should, if possible, be given, to instruct us to keep within those limits in which we may remain safe in our vicinity to such beings. The class of Reptiles is particularly one of those upon which less correct ideas prevail. Because there are some poisonous Snakes, all Snakes are dreaded ; because there are some toads, the skin of which is covered with a sharp slime, all the animals of that family are considered as dangerous, and in this condemnation a still larger number of animals is included, which are not only perfectly harmless, but which are really very useful in every respect, and might be made still more so but for our prejudices. A teacher in Natural History should early attend to show that Turtles, Lizards, Snakes, and Frogs belong together in one class of animals, notwithstanding the great differences in their external form. In the first place, the extraordinary form of Turtles must excite great interest, and the frequent recurrence of several species in various parts of this country will make it very easy to show living specimens to the class, to illustrate the remarkable form of the body, its flatness, its shield-like form, the extraordinary size of what may be considered the chest, in comparison to the thin neck, and small head, and small tail ; the power they have to retract the head and legs, and to some degree, also, the tail under their shield ; all these points make Turtles exceedingly interesting, even to one who is not very familiar with them. Something of the large Turtles which occur in the sea, and which are used as food or from which the tortoise shell is derived, cannot fail to be

known, and might be introduced in connection with this illustration of the small native species, the body of which is equally covered with horny shell, and some of which have also very palatable meat ; such as the Terrapin.

“ But what should particularly be mentioned, is the ability of these animals to spend the cold season in a kind of torpor under the ground, during which most of the functions of life are suspended, no food is digested, and respiration and circulation almost cease, so much are they reduced in their activity ; nevertheless, year after year, at the returning heat of Spring and Summer, they come out to lay their eggs. The slowness of their motion should be contrasted with the quick powerful activity of Birds, and the more energetic movement of Quadrupeds.

“ After speaking of Turtles, Lizards might properly be introduced, when it could be shown how closely they resemble Turtles, and how much they differ from our domesticated quadrupeds, though they also are provided with four legs ; but instead of hair, they have scales covering their skin ; they lay eggs instead of bringing forth living young ; the young, hatched from the eggs, are not nursed with milk, but left to find their food by themselves. Their body feels cold, whilst the higher quadrupeds are warm blooded ; so that we have here an instance of animals, apparently very similar in form and external appearance, which, by their internal structure and mode of living are scarcely related ; while others, which apparently differ far more, such as the Bats and domesticated Quadrupeds, are really related by their structure and mode of living, though their external form be widely different.

“ A child who has understood these differences and the possibility of such connections, is prepared to go on with any subject in the investigation of Natural History ; for these facts and their correct understanding, are among the fundamental facts in this science, and the sooner they are understood the better the pupil will be prepared to make further progress. And though considerations of a far higher order may be introduced upon these subjects, an intelligent teacher will perceive how early he may prepare his pupils for the higher and highest education in Natural History. He himself will soon be deeply interested by these suggestions ; for, if after examining Turtles and Lizards, he take up a Snake, he will find that

an animal of a widely different form, may still preserve the same general character, and be closely allied with beings, which, at first sight, seem totally different. For Snakes and Lizards are hardly distinct, except in the circumstance, that the legs are almost entirely wanting in Snakes, or exist only in a very rudimentary state.

“The harmless kinds of Snakes should be well known ; the more so, as they may be ranked among the most useful which destroy large numbers of injurious Insects, and in no way do any injury to men or animals. It is very unwise, I may say wrong, to allow the horror with which we are impressed by the sight of the Rattlesnake and other most poisonous serpents, to be transferred to those pretty, harmless, and even beautiful varieties which feed in our gardens, or along our brooks, and may be handled with perfect impunity. We may even learn a great moral lesson from these facts, as the ordinary way of dealing with these animals is as injurious as would be the deportment of a man who, knowing the bad character of some neighbor, should curse all mankind, and avoid any connection with all men because he has known bad ones.

“The Fishes are so numerous along our shores, and along all our brooks, and rivers, and lakes, that the opportunities of becoming acquainted with these inhabitants of the waters, will be sufficiently ample and favorable ; and every child should early in life become acquainted more intimately than most men are, with animals which are so extensively useful to man ; which afford him such wholesome food, such precious products for his trade, and which are diffused in such variety all over the world. Let a single fish be examined carefully, its scales be looked at minutely, its fins be examined, their respective position ascertained, their uses in motion be satisfactorily investigated, the mode of breathing through gills be contrasted with the respiration through lungs, the extraordinary power of moving the jaws and other bones of the head be ascertained ; let the easy motions of these apparently clumsy bodies be watched, and I should be very much surprised if a student would be willing to end his study with the first examination, and if he were not to make it a point to compare the different Fishes with each other, to satisfy himself that not only their colors vary extensively, but that their forms also are greatly diversified, that the position of the fins is different in the different kinds of Fishes, and

that there is such a variety among them as to interest the mind in their study as extensively as we may be interested in the study of the Birds or the gayest Insects.

“But the great thing to interest pupils in these matters, is, to bring natural specimens before them; not those poor illustrations and the meagre accounts which are found in our elementary books, but the living nature itself. There is as much difference in the impressions thus derived, as there is between the sight of a flock of Birds flying through the air or a herd of animals playing in the fields or upon the prairies, and the sight of some wood-cut in a picture book. I am aware that most teachers will be, in the beginning, diffident, from want of personal acquaintance with these subjects; they will hesitate to speak of what they do not know themselves. But let one go to the fish-market and ask a fisherman to point out to him a codfish, or a pickerel, or an eel, and with the knowledge of the name he gets there, let him apply his senses and intelligence to see what can be noticed at first sight, of the external characters of such an animal, and tell it to his class; and if he fails to interest them, I should be satisfied that such elementary instruction of Natural History is out of place in our schools. If the teacher be still diffident, and does not trust himself in this new path, let him question sportsmen and hunters about Birds and quadrupeds, and his market-man about Turtles and Fishes, and he will soon find that his store of information is worth communicating; but I entreat him to avoid the learned language of the books, which would be utterly out of place with children, and should be reserved for the systematic instruction of more advanced pupils.

“It is really my deliberate opinion that the study of Natural History should be undertaken as early as any other instruction, with the youngest children; that they should learn to play with natural objects, and derive from them both amusement and instruction in a far more rational way than by mere toys; for they will be the more amused as the objects which will thus be placed in their hands are more diversified, and they will be more instructed as these objects teach them more extensive lessons at the same time that they educate their senses. In this way, children learn to see and compare most diversified objects, they learn to appreciate different

forms ; to distinguish colors and all their different tints ; to form for themselves general ideas embracing various things, more or less closely related to each other ; indeed, they are trained in thinking and seeing, and using also their hands ; and such a practical training cannot be introduced too soon in the education of children. I may say that it should precede all other instruction, and be carried on simultaneously with the ordinary studies of common schools, and should be introduced also in Latin and Grammar schools, and be continued as far as possible, before the young student enters upon his professional studies, or begins to devote himself with more care to any particular branch of study. Brought up in that way, a pupil will have a broader foundation for any farther instruction ; he will understand more readily the more abstract instruction in Arithmetic, Geography, and the Languages, for having learned to deal with special facts, with isolated objects, with unconnected phenomena ; and, with this better preparation for any kind of studies, whenever he is allowed in more mature years to receive also special instruction in Natural History, he will make more rapid progress, and be prepared to form more correct ideas about the physical world. He will enter with a better spirit into the study of the philosophy of Human Nature, for having known something of its physical organization compared with that of animals.

“The question might be raised against so extensive an introduction of the study of Natural objects into the schools, on the ground of want of time. But if the first aim of all education and instruction is to develop the various faculties of pupils, is it not plain, that the objects which address themselves so directly to our senses must have a very powerful influence in that very direction, and tend effectually to promote this object ? and, far from being a drawback upon other branches of instruction, the proportion of time allowed to these Natural studies, will only increase the power of attention paid to the others ; and the variety of topics thus introduced into the schools, will be a powerful help in exciting the interest of the young, and a great inducement for them to apply themselves to all the subjects which are taught ; especially if those more interesting objects are introduced as a sort of reward for the attention bestowed upon those which have less interest in themselves.

“Another objection will be raised, on the ground of the difficulty of securing the specimens for illustration. But this difficulty may easily be obviated ; collections sufficient for such an elementary instruction can be made during the vacation, by every intelligent teacher, and might be obtained at little expense, from dealers in objects of Natural History. There are even large numbers of these objects which every pupil might collect for himself, in his leisure hours, or procure from his more advanced school-mates. And, as it has been so extensively the practice for the students of our Colleges to teach school during certain months of the year, I do not see why the students of Scientific Schools, also, should not be induced to teach what they have learned in their respective departments of Science ; and why Chemistry, Natural Philosophy, Geology, Botany, and Zoölogy cannot have their turn in the instruction given in the elementary schools, by students already advanced in these studies.

“I have already spoken of instruction in the Natural History of the larger animals, and have, I trust, shown how easily this subject might be illustrated in schools ; but I may now add, that all branches of Natural History are equally adapted to such elementary instruction, and that perhaps some branches will excite even more interest than the study of the larger animals. I need only allude to the study of insects or shells. Whoever has watched the transformations of a caterpillar into a chrysalis and butterfly ; whoever has seen such a worm-like animal, assuming, finally, the brilliant appearance of a flying moth ; whoever has witnessed the economy of a bee-hive, or of an ant-hill, will know that these wonders, well understood and narrated in a simple manner, without display of learning, will be capable of fastening the attention of the youngest child. Whoever has walked along a beach with children, however young, must remember with delight, their excitement at the sight of so many beautiful shells, five-fingers, and other productions of the sea, and how they have been puzzled at their hundred questions, by which the children display their interest and desire of learning. And where, as is the case of the animals of this State, we possess upon them so full and interesting works as the Report of Dr. Harris upon the Insects injurious to Vegetation, or the Report upon the Shells by Dr. Gould, there cannot be the slightest

difficulty for a teacher to take hold of these works and prepare himself fully, with little trouble, to illustrate these matters in a very satisfactory manner. And why should not such books be used as reading books, alternately with those commonly used, which are too extensively of a literary character, and, indeed, exclude so completely the study of Nature, that a youth may almost go through the entire course of his education, without being once taught that there is an external world, the work of an intelligent and wise God, who has provided for the wants of man in all directions, and surrounded him with so thousandfold evidence of His goodness and power?

“The lower animals are particularly suited to this elementary instruction, for the very reason that they are so numerous, and occur in so great plenty everywhere, and may be picked up in all seasons, and preserved with the greatest care, and be kept, without occupying much space. Aided by his pupils, making occasional walks with them during the pleasant season, every teacher may, in a short time, have, gathered in his school-room, a valuable collection, to illustrate the Natural History of the country where he lives, and not only make himself in that way more useful to his class, but even contribute to the advancement of Science, by collecting a great variety of objects which usually escape the attention of those who are not permanent residents in that district.

“There is, no doubt, a particular charm in the study of animals, in the investigation of their mode of living, and habits. The greater facility we have of understanding them, for the very reason that they in some degree partake of the same nature with ourselves, will, at all times, make them the most appropriate objects of elementary instruction in Natural History. Nevertheless, the study of plants should not be neglected; and there are many topics which might, with as much propriety, be introduced early, and be made very interesting, even to children. Why is it, for instance, that in the first springs of their life, their attention is not called to the growth of plants, and the wonderful renewal of their verdant covering, which spreads over the whole surface of our globe? Why are they not prepared for such a sight during the winter? Why are the leafless trees not pointed out to them at an age when they can hardly remember to have seen them in their full foliage,

covered with blossoms, or hanging with fruit? If that was done, how they would be amazed to see the change going on, and for months to witness the opening of buds, the growth of leaves, the formation of flowers, their short duration, the succession of fruit-buds, and finally the growth and ripening of fruit. It requires no knowledge of Botany to teach such things; it only requires a sense for the beauties of Nature, and a mind unwilling to shut one's eyes to the most wonderful phenomena in Nature. Let, then, towards the fall, the changes again be witnessed; let the change in the color of leaves be watched; let their fall be noticed; let it be known that after this brilliant exhibition of life—for plants live, though they live in a different way from animals—that, though most plants lose all their lively appearances during winter, they are not dead, but only asleep, like so many animals that spend the winter in torpor, motionless, buried under the ground. Let it be known that, in these respects, different parts of the world do not present the same phenomena; that there are countries so far remote towards the poles, that an almost perpetual winter prevails there, and that few plants grow during their few summer days; let it be known that there are other countries over which a perpetual spring and summer prevail, and thus introduce the first elements for the study of physical geography; let it be said, at the same time, that animals also vary in different countries, and that a more extensive acquaintance with all the inhabitants of our globe, shows a wonderful adaptation of the different tribes to the zones in which they live.

“But from such a general survey, we turn to look more minutely into the peculiarities exhibited by the different plants. How instructive and interesting must it not be for a child, to see that every plant has peculiarly formed leaves! Let one day be devoted to this subject; and a bundle of boughs of different trees and other plants be gathered and shown; compare the leaves of the various Oaks with those of the Maples, of the Poplars, or with those of the Ash, or the Rose-bush, and what beautiful diversity of forms will be displayed! What elegant outlines will be found among them! Let, then, the children try to draw these forms upon the slate, to fix more precisely in their memory this diversity, which cannot fail to impress them most vividly; and they will not only have learned all these facts, but they will attempt to draw them for

themselves, whenever they can lay their hands upon a pencil or a slip of paper. The imitative disposition of this age is so great that it would be more difficult to prevent a child from going on by himself in this sort of amusement, than to induce him to take up other studies. Let another day be devoted to the investigation of some flower, and select for that purpose, in the beginning, the larger ones, such as a Tulip, or a Rose. Let the flowers of different plants be compared, the differences pointed out, the resemblances shown; for instance, the flower of Apple and Pear trees, and the flower of Roses and Strawberries; and a child will soon know, what it has cost Botanists so many centuries to learn, that plants, apparently the most different in their aspect, may have flowers of the same structure; for Strawberries, Rose-bushes, and Apple trees, belong to one and the same class. Let, again, a Tulip be compared with a Lily, or a Hyacinth, or with the flower of an Onion; and here, again, the resemblance will be very striking, and the close relationship between these latter flowers will appear as obvious, as that between the former. It will then also be seen that those plants which have only one sort of leaves in their flower, equally colored, as the Lily and Tulip, have leaves of an entirely different structure, with nervules running all in the same straight direction, while those flowers in which there are external green leaves, and colored ones within, as the Rose, the Apple, and the Strawberry, have a strong middle rib in their leaf, from which other ribs branch at various angles, and combine in various ways into a network. Let, afterwards, these comparisons be traced in plants with smaller and less conspicuous flowers, and the great contrast with the former will soon take hold of the imagination of our young students, and transform them early into careful observers. They will be struck with the fact that the Oak, though a large tree, has very minute and very imperfect flowers, while so many small plants are adorned with the most beautiful flowers which exist among vegetables. They will thus learn that the size of a plant does not indicate its superiority in the vegetable kingdom, but that it must be known by its flowers and fruits. If attention is further called to Mosses, Lichens, and Seaweeds, still other structures, still other forms will become known not the less interesting for being simpler, not less attractive for being more

humble, nor less worthy of our attention for producing neither flowers nor fruits. After such an illustration of the vegetable kingdom, it should be shown how easily plants can be preserved, how they may be dried between the leaves of a book, and how, with some care, part of their beauty, and, at least, all their distinct character can be preserved; and, within a few quires of paper, every boy and girl may have a nearly complete collection of the plants growing within many miles around their house. And, no doubt, if he shows so much interest for plants as to be willing to take the trouble of preserving them, he will occasionally meet with some Botanist willing to give him the names of all his plants, anxious to impart to others the knowledge for which a desire is shown in such a way.

“It were almost useless to add, that an acquaintance with plants at large, is the best preparation for the farmer to improve upon his agricultural pursuits, to introduce in his fields new varieties of seeds, of grasses, of vegetables of all kinds; to stock his nursery with new varieties of fruits, and adorn his garden with new kinds of ornamental flowers. For my own part, I should consider myself highly rewarded, should it be found after half a century, that a number of intelligent men have been benefited through life by the knowledge they had acquired in Natural History, in consequence of these suggestions to introduce this study throughout our schools as a fundamental branch of elementary education.”

[To be concluded in our next Number.]

Mathematical.

The centre of gravity is not, as a general thing, the centre of magnitude. It is the centre of magnitude only when the body is homogeneous, and when, if it be divided by *any* plane passing through the centre of gravity, the portions on opposite sides of the plane are symmetrically equal. In every body the centre of gravity has this property: that if, in whatever position the body may be placed, *any* vertical plane be drawn through this point, and the weight of each atom on one side of the plane be multiplied into its perpendicular distance from the plane, and if the same be done with respect to the atoms on the other side of the plane, the sum of the one set of products will be equal to that of the other set of products.

This is expressed in scientific language by saying: the sum of the *moments* of the atomic forces due to gravity on one side of *any* vertical plane passing through the centre of gravity, must be equal to the sum of the *moments* of the similar forces on the other side of the plane. If there are several bodies, the positions of whose centres of gravity are known, some of these bodies must lie wholly or partially on one side, and some on the other, of the vertical plane passing through their common centre of gravity, in which case it will be sufficient to multiply the weight of each body by the distance of its centre of gravity from the plane. The same is true of the parts of the same body.

Again, we have the following definition: "The centre of gravity is nothing more than the centre of weight. Cut a body of uniform density in two, by a plane passing in any direction through its centre of gravity, and the parts thus formed will weigh exactly the same." *Quackenbos*.

To place this matter in a clear light, let us take a few examples. The centre of gravity of a cone is in the axis, and $\frac{1}{4}$ of the length of the axis distant from the base, and if the cone were cut through this point by a plane at right angles to the axis, the upper portion would contain 27 while the lower would contain 37 parts. The centre of gravity of the convex surface of a cone is in the axis, and $\frac{1}{4}$ of the length of the axis from the base, and when the cone is divided by the plain as above, the two parts of the convex surface will be to each other as 4 to 5. The centre of gravity of the entire conical surface, including the base, has no fixed position, since the position will depend upon the ratio of the altitude to the diameter of the base. What has been said of the centre of gravity of a cone and that of its surface, is manifestly true of the centre of gravity of a regular pyramid and that of its surface.

As another example, take a homogeneous body in the shape of two cylinders, united at their bases and having their axes in the same line. Let the axes of one cylinder be two inches long and the diameter of the base such that the cylinder shall weigh one hundred ounces. Let the other cylinder have its axis one hundred inches long and the diameter of the base such that the cylinder shall weigh 2 oz. The centre of gravity of this compound body will be in the common axis and at the junction of the two bases. For the centre of gravity of each cylinder is at the middle point of its axis. Multiplying the weight of each cylinder by the distance of its centre of gravity, from the junction we have $100 \times 1 = 2 \times 50$. Separating the cylinders by a plane at right angles to the axis, one part will be fifty times the weight and fifty times the magnitude of the other. Both, this body, however, and that of the preceding example *may* be divided through the centre of gravity so that the parts shall be equal both in weight and magnitude; namely, by any plane passing through the axis.

The position of the centre of gravity should be well understood by teachers, since, upon this subject, most of our text-books are very meagre and, in many instances, quite erroneous, and since, in the investigation of the pressure of liquids, a knowledge of this position in regard to surfaces is very important. The *Encyclopedia Britannica* may be advantageously consulted, although it does not contain all that is wanted.

T. S.

Resident Editor's Department.

AMERICAN INSTITUTE OF INSTRUCTION.

THIRTIETH ANNUAL MEETING. NEW BEDFORD, TUESDAY, AUGUST 23.

[*Concluded.*]

THE truths of botany were of such a kind as to give scope to the exercise of the highest faculties, and at the same time to be comprehended by the most moderate capacity. The best way to study it was to cultivate and observe a single kind of plant. Trees demand constant care and oversight, but not excessive labor. The best orchard he knew was cultivated by a teacher.

Those who could not cultivate trees, could devote themselves to flowers with equal advantage.

The greatest want of the teacher was systematic regular exercise. It was a great and fatal mistake to omit habits of labor in entering upon sedentary pursuits. To avoid this we should take out of door exercise in the sunshine. The teacher does not require violent exercise, but gentle action and recreation, and nothing can afford this as well as the study of botany.

The lecturer, in conclusion, advocated the introduction of the study of botany into the common schools.

After the conclusion of the lecture, the audience was entertained with a song by Mr. Thatcher and three young ladies.

Mr. Greenleaf of Brooklyn, N. Y., moved that the subject of the lecture by Dr. Emerson, be made the topic for discussion at the present time, which being agreed to, he proceeded to say how much he was gratified with the lecture, and especially as the lecturer alluded to the grand old forests of England. He was sorry some measures could not be taken to protect the trees of our older States, so that they should not be cut down for fuel. He would like to see an organization in Massachusetts that should offer premiums to the persons who would do most to beautify the State, in setting out or rearing trees.

Mr. Perry of Providence, desired to have Mr. Emerson give some incidents of his foreign travel, to illustrate that branch of education suggested by his lecture, by showing how it is attended to in Europe.

Mr. Emerson said he would be glad to carry every one of the ladies and gentlemen present, to the beautiful forests of old England. There is really no such thing in this physical world as those forests. The great question that he desired to bring up, was — Whether the study of natural history, especially the elements of botany and chemistry, ought to be introduced into our common schools, particularly where the great part of the pupils belong to an agricultural population?

Mr. Batchelder of Salem said: Mr. President, I have just come from a pine

forest in the western part of our State, where earth's giant sons tower above the "rocks they shade;" where many generations of the pine are represented, from the seedling of a few inches in height, just venturing above the ground with timid air and aspect, — as if doubtful of the reception it might receive, — through the successive generations of every grade and magnitude, till full displayed, the towering mast of seventy feet of timber, clear and straight — asks but the woodman's axe and the carpenter's skill to become the bearer of the sail of commerce, and the glory of our nation! Then, down again to the venerable trunk of thirty feet high, and four or five in diameter — the venerable relic of the days of our great grand-sires; — and lastly, the shapeless, huge, and boughless trunk, in its mossy grave, from which it can be disinterred but by delving among the living sods that hide it from our sight.

It is beautiful to contemplate the splendors of the branching elms of an English park — to read in their existence the care and the characters of those who have expended time and substance for their preservation. But while we sit patiently at the fallen trunk of a giant pine, composed of two hundred and sixteen circling rings, — each ring proclaiming the growth of a year, — and standing at hand its hoary parent, and grand-parent, distinguished but by its form beneath our feet, thronging thoughts of the races of the red men who roamed under their shade, of whom no trace now remains, take possession of us.

Such a forest, with opening glades, and various exotics giving variety and beauty to the scene, may well be made the theme of inspection to the young; and when the day desired by the lecturer shall arrive, when the tasks of the school room shall be blest with the relief of green leaves and flowers, we may hope that a chapter may be devoted to an exhibition of the considerations which may be attached to the historical phenomena grouped around a venerable forest of Western Massachusetts.

If some hesitation has been manifested by the teachers of the Institute, to respond affirmatively to the proposed introduction of this branch of natural history, into our schools, the coyness must have its origin in doubts as to the method to be pursued; and, perhaps, from a want of familiarity with the subject so eloquently treated by the lecturer. Will he have the goodness to add to the obligations under which he has placed the Institute, by the exhibition of a more detailed method of giving instruction in Botany, in our Public Schools?

Mr. Emerson repeated that he thought the time would come when the elements of the sciences which should go to qualify the cultivators of the earth for their work, would be introduced into the common schools. It seemed to him almost self-evident that the very object of the common schools should be to qualify those who attend them, to go out and do better the work they have to do in the world, than if they had not been in the common school. He thought the study of the elements of botany and chemistry would qualify every farmer the better to understand, than one in a hundred now does understand the nature of the soil, and the best way of adapting the soil to the crops to be raised. The teacher who wishes to introduce the study has only to select a good book, and make himself master of it; and then, in familiar talks with his pupils, to bring before them the interesting facts which he will love to teach, and his pupils will love to hear. Prof. Gray's work, "How Plants Grow," was recommended as a book admirably fitted for the aid of

the teacher in botany; and Youman's and Stockhardt's Chemistry were referred to as being easy and simple, and well adapted for the use of a teacher who has not before studied chemistry.

A teacher to teach well, should carry all that he teaches in his own head, so that in his lectures he may see how the mind of the child is working, and adapt his instructions to the precise state of the case. In closing, Mr. Emerson asked with some earnestness, am I right or am I wrong in the conclusion to which I have come, that the elements of the art which is most important to the welfare of man, the art of cultivating the earth, should be made familiar to all those who are about to enter upon the work?

Prof. Crosby of Salem, said, The question has been asked, Ought the elements of Botany and Chemistry and the great principles of Agriculture to be a part of common school instruction? The question is, virtually, Ought the means of learning these most important things to be within the reach of all? Because, in this country, whatever is a part of universal education should be a part of common school education; for the common school is the university of the people. Ought these elements of natural science to be a part of the education of all? If only a few were surrounded by these objects, if only a few had eyes to behold the beautiful objects in the garden and forest, and only a few had ears to listen to the whisperings of nature's music, then the argument would not be so strong for making this a part of universal education. But when the Deity has surrounded us all with these objects from infancy to the grave, has He placed them around us that they should not receive attention, that we should not raise our eyes to the tops of the noble monarchs of the forest, that we should walk along the dusty paths of life and not catch the glowing hues of the flowers? No one will contend for this. Then the question comes, are we, with these reasoning powers, designed to go through life without understanding these objects about us, and which we must be continually observing? Certainly not. How wonderful the difference in the whole course of life, whether we go through it intelligently or unintelligently! Whether the child, the youth, the man looks at the forest above him, not knowing the names of any, not knowing the names of the groups of stars in the constellations, without any knowledge of the laws or the wonderful facts in astronomy, without any conception of the infinite distance of those stars, and without having that expansion of the mind which comes from these sources to us all, if properly educated, in a gorgeous night. And, on the other hand, how great the difference, whether a person goes through life, knowing nothing of the structure of trees, the root, the trunk, the life, except what the mere sense gives to him, or whether he goes through life with a knowledge of the relations of these parts, and the wonderful laws that govern them all.

And then the moral lessons of this study. The forests are God's first temples; they are the oldest living things on earth; but more than that, they are the marvellous illustrations of the goodness of our Heavenly Father. When rocks are thrown up, or man makes a waste on earth, how soon this vegetable world, under the direction of infinite wisdom and love comes up to cover all with beauty! Flowers spring up by the way-side if we will leave even the dusty paths of business free but a little time. When we return we find them covered with exquisite

flowers; so that the study of these things is not only commended to us by its relations to all our daily walks and works, but it is continually speaking to the heart of the works of Him who has made everything beautiful in its season.

Mr. Leander Wetherell of Boston was called up by some direct allusions in the closing words of Prof. Crosby, and he proceeded to express his agreement with gentlemen who had spoken, in the importance of the subjects under consideration, but he thought the school room, books, and spectacles, not the proper adjuncts to the successful pursuit of them. He would rather have a teacher give ten minutes instruction in the garden, the grove, or the field, than as many hours in the school-room in connection with a formal recitation from books. In illustration of the too common ignorance of men, otherwise well educated, on this subject, he related an incident respecting a person, who, although a college graduate, did not know a field of oats from one of barley, or timothy from wheat, or a maple from a chestnut tree! The teacher should make himself so well acquainted with the names and peculiarities of plants, birds, and even reptiles, that when the child asks what bird is singing in the tree, or any other so natural question, he need not be obliged to confess that he cannot tell.

Prof. Crosby responded to some suggestion respecting the use of text-books, that he would not have such a book defining Botany so and so, and giving long lists of names, of classes, orders, species, and genera; but, like the gentleman who had preceded him, he would have the knowledge communicated in connection with the natural objects themselves. He would take the ground that all the various -ologies really ought to precede the study of reading, in the common school. In other words, the attention of children should be turned by the teacher to the wondrous glories spread all about him; and when his intellect is somewhat developed, and his spirit cheered by the brightness of these glorious objects, then he may begin to prepare himself for the study of books.

We make lessons hard by the hard names we give in science. Let the teacher by oral instruction, give definiteness to the observations made with his pupils; let him teach the child how to think for himself, and how to experiment; and without any of the consumption of time, which seems to be apprehended by some, the child will, in the ordinary period of school life, not only learn to read, write and cypher — which are important, essential elements of education — but will likewise learn the great facts of the universe about him, will learn to read the book, the leaves of which are spread before him all the time. The two things will assist each other, and the child instead of being retarded, will be hastened in his progress; the faculties of the child will grow and expand to the light, even as the petals of the flowers do in the garden.

Messrs. Batchelder of Salem, Bulkley of Brooklyn, and Phelps of New Haven, were appointed a committee on aiding teachers in obtaining situations.

An invitation was extended by the Trustees of the Free Public Library to the members of the Institute, to visit the library rooms, which was accepted.

Adjourned.

EVENING SESSION.

At 7½ o'clock, the Institute again met, at the William Street Baptist Church, which was filled completely, many being unable to obtain admission. After music,

by a select choir under the direction of Mr. A. T. Thorup, James W. Hervey presiding on the organ, Professor J. D. Butler, of Madison University, Wis., delivered a

LECTURE ON THE CLAIMS OF THE CLASSICS.

The classics, he said, had been studied for centuries throughout Christendom, and formed the curriculum of every university, and though often attempted to be banished, had as often been reinstated, and such would always be the case.

The first claim of the classics was as a means of mental discipline. They were a school of the faculties, enabling man to bring them under control and make them of use, without which they were of no value. No man's faculties reach their acumen till tasked to the utmost—all are improved by exercise, and this was done by the study of the classics.

What costs nothing is worth nothing. The study of the classics was hard, and this renders them valuable. They are harder than mathematical studies.

They cultivate first, the power of philosophical memory. One word often has hundreds of derivatives and shades of meaning, which it requires more than mere stuffing to retain. Judgment and discrimination are cultivated and sharpened and the synthetical powers are improved. They also cultivated originality, bringing out lurking faculties which would otherwise sleep. Men are raised to originality by contact with original minds, as inventions are more frequently suggested in the patent office. The liberal arts have progressed in the same way, and it is in the galleries of art that a school of inspiration is found.

It was asked why not study English writers for this purpose? Because ideas expressed in our own dialect flow too easily into the mind, while it is kept on the stretch in the study of other languages.

The benefit of these studies was not, however, merely disciplining. As the Arctic voyages discovered a *man*, Captain Kane, if nothing else, so did these studies develop men. They prepared for all other studies by the information they imparted. If English were derived from its own roots, it alone might be studied, but all its hard works came from Greek and Latin. Saxon words were those of common things, and did not need to be learned. Shakspeare and Webster were cited as remarkable for their Latinity. Besides we learned Saxon-English by translation. We sought as much as possible for Saxon equivalents, else we only transferred instead of translated. Thus by wooing the classic muse we should be sure to win a Saxon bride.

The terminology of all the sciences and arts is Greek. These languages were more alive than dead, because they retained a power of growth which modern tongues have lost. No dictionary can keep pace with the increase of Greek words in the English language.

This study also classifies classic allusions, so abundant in our literature. Few unclassical persons enjoyed Milton, and many only kissed the hem of Shakspeare's garment, who might else have leaned on his bosom. The enjoyment of travel also was greatly increased by classic training.

The best aid to the study of the modern languages, was the Latin, from which they are mostly derived. One acquainted with it could acquire French or Italian in a tenth of the time required by another ignorant of it.

This study promotes expression of thought and is a lesson in style. Style wings thoughts around the world. What one knows is nothing, save to himself, except so far as he can make it known. Men feel their weakness most in style, and the commonest mind has rare thoughts which perish for want of expression.

Other claims of the classics were that they were the language of inspiration, that but few books were extant older than those written in Greek, and the aid they afforded to the study of comparative philology, which tries to explain the buried history of man in regions and ages of which we have no remains, and they unfold the pre-historic life mind, not of dead matter.

The lecturer closed with a fine allusion to the unity of all knowledge, and exhorted the members of the Institute to zeal and harmony in promoting it.

The following were appointed a Committee on Nominations: — Messrs. Stone of Plymouth, Brown of Toledo, Cruikshank of Albany, Allen of Norwich, Page of Boston, Sawyer of Concord, N. H., and Kneeland of Roxbury.

Adjourned.

SECOND DAY. MORNING SESSION.

The meeting was opened at 9 o'clock in the City Hall with prayer. Mr. Congdon stated that more than seven hundred ladies were now entertained by the citizens of New Bedford; but that there was room for more "unprotected females" who should not yet be provided for. The first exercise was a discussion on the question:

Is it expedient to require the use of the Bible by Pupils in Public Schools?

Rev. B. G. Northrop of Saxonville, advocated the affirmative of the question with the single limitation that there should be no coercion wherever conscientious scruples should arise. The Bible, in the common version, is not a sectarian, but a national book. If read by the pupils, it will make a deeper impression, awaken a deeper interest, and be more easily remembered. The objection that the Bible is too sacred a book to be used familiarly in our public schools, by pupils, need not be discussed. The Bible has claims above all other books for its educational value. Who can estimate its influence over our country? Luther, Daniel Webster, Rufus Choate, and others, experienced its power. The Bible is remarkably fitted to educate and develop all the faculties of the human mind. Especially is imagination educated by the stories, parables, and biographies of the Bible. Not only the themes, but also the conceptions, phraseology, and illustrations of Milton were derived from the Bible.

Mr. Greenleaf of Brooklyn, said, the translating of the Bible into the language of a converted people, had always been one of the first objects of missionaries. We need authority in our schools. The words of father or mother will not save our boys and girls, but the word of God will do it, if children are made familiar with it from their earliest years.

Mr. E. A. H. Allen of New Bedford liked the law of Massachusetts, which requires the use of the Bible in our schools, but was obliged to answer the question under discussion in the negative. "*To require the use of the Bible by pupils,*" is compulsion, and in contradiction with religious liberty. No child should be forced to do that which he or his parents may feel to be inexpedient or wrong in relation to sacred matters. What is deepest in the character and holiest, should be most

sacredly cherished and most lightly touched upon by those who have the care of children. The great success and the still greater failure of the Jesuits as educators, was to be found in their command, not to let the pupils have any secret before their superiors. The human heart will have its own way, and if outside compulsion is carried too far, hypocrisy must be the necessary consequence. Let such portions of the Scriptures as are best fitted to develop moral character be read in our schools, daily, by the teacher or the pupils, but let no scholar be *required* to take an active part in it.

Mr. F. A. Sawyer of Charleston, S. C., spoke in substance as follows: I believe it was the intention of the framer of this question that the word "*require*" should have a positive meaning. It means more than "you may or may not," it means "you must." If all those who desire to be excused, can be, then we shall have no quarrel. Every body will go in for a law that every body shall do as he pleases. The question to be decided by this Institute is, whether it shall be required of all the pupils to read the Bible in the public schools, or not.

Let us see, first, whether such a requirement would be *right in principle*. It seems to contradict the whole theory of the Institutions of Massachusetts or the United States. I am not prepared to admit the slightest connection between Church and State in this State or country. The public schools are a part of the State, and one of the strongest branches of the State Government. Every school-master is as much a State Officer as His Excellency, Gov. Banks. I believe that any law which compels the observance of an exercise in our public schools, which is purely religious, violates the theory of our institutions. Will any one pretend that reading the Scriptures is not purely a religious exercise? If not, what is it then? If, as Protestants, we are prepared to require the reading of the Common Version by Catholics, some day, in some localities, the Catholics may have the same relation to us which we now have to them; and are we ready to submit to have a Catholic school committee or State government say to us, your children shall read the Catholic Scriptures? If you are ready to accept that state of things, then you are honest, but you have placed religion upon the unsafe basis of a majority. If you do not accept, then you expect of others more than you are willing to do yourself.

But supposing such a requirement were right in principle, *it would not be worth the trouble* to insist upon its enforcement. No man will go farther than I do in holding that the study of the Bible is necessary for the education of the young. Some great moral power must be brought to bear on the youth. But I do not believe this moral question will be in any great degree determined by the public schools. It belongs to the family, the church, Sabbath schools, and other institutions distinct from the public schools. I would not take away one iota of the responsibility of the public teachers for correct moral teaching and a good example; but we are apt to expect too much of the public schools in this direction.

A word with regard to the influence of the reading of the Scriptures, practically. Does a good educator use any text-book without putting questions or making any remarks? There is more power in the spoken word than in the printed letter. The mere reading of some verses from the Bible at the opening of the school comes off as a matter of course, and perhaps ninety per cent of the scholars have forgotten

at noon what has been read in the morning. Should the teacher, in order to produce a deeper impression, accompany his reading by remarks, he is liable to excite the feelings of other denominations.

But let it be supposed, finally, that the reading of the Bible by pupils could be enforced, should we be willing to do it? The experience of the church and of society is against going back to the practice of Mahomet: "Believe or die!" Neither will Massachusetts open the doors of her schoolhouses and say to Catholic children: "You shall adopt our forms of belief; at any rate you shall go through the forms, or else you shall be deprived of the advantages of the school."

Mr. M. T. Brown, superintendent of the public schools of Toledo, Ohio, took substantially the same ground. He said, the subject now under discussion will become the practical question of this age. Which version is meant by "*the*" Bible? King James's version was excellent, but had its weak points, and the same is the case with Douay's translation. The difference between the two versions is but slight; still there is a difference. The faithful Catholic will not read the Protestant Bible, and many a Protestant would hesitate to read the Catholic translation. The Protestant city of Boston has the proud reputation of having made a modern martyr, in this nineteenth century, for religious toleration; a young martyr who has had—I do not know how many—golden crosses and silver pitchers for his heroism. What is done to-day in the East by Protestants, may be repeated to-morrow in the West by Catholics.

Our constitution declares, that every citizen shall have full liberty to worship God according to the dictates of his own conscience. The Puritans knew this principle, and it is a pity that they forgot it when they punctured the ears of the Quakers and Baptists, because their faith was not whole. Theoretically, our principle of religious liberty is good enough; when shall we carry it out practically? All citizens are taxed to support the public schools in which the Catholics are required to hear there the Protestant Bible read. The speaker closed by saying: I plead for toleration. The past has tried intolerance; has shown us the rack and the dungeon, the sufferings and the blood of strong men. Our public schools will stand as long as they are free, and admit black and white, Catholics and Protestants, Americans or foreigners, on the same conditions. But if the bitter spirit of intolerance should gain the sway, we may despair of good results.

Mr. William E. Sheldon of West Newton, thought that school boards who determine what book shall be used as classics in the school, had the right to require the use of the Bible as a classic; and he claimed for the Bible the right of standing at least side by side with the great Greek and Roman classics.

Mr. John Kneeland of Roxbury, urged the responsibility of teachers for the moral culture of their pupils; and strongly advocated the reading of select passages from the Bible by the teacher rather than the pupil. He then spoke of the duty of every teacher of becoming duly imbued with the spirit of the Gospel, and so carrying into the schoolroom a holier and higher tone of mind.

The discussion closed by brief remarks from Messrs. Sawyer, Kneeland, and A. P. Stone.

Mr. Congdon tendered to the members of the Institute an invitation from the citizens of New Bedford to an excursion, on Friday, in the bay and harbor of that city. The invitation was accepted.

J. D. Runkle, Esq., delivered an address on "*The Mathematics considered as an Element in a Liberal Education.*"

[It was our intention to give a pretty full account of all the proceedings at this session; but we have just learned that in a few months not only the lectures will be printed in full, but also a minute account of the discussions. We shall, therefore, only briefly mention the proceedings, referring those who take a deeper interest in the matter, to the printed volume to be issued by the Board of the Institute. RES. ED.]

An alarm of fire, in the midst of the reading, disturbed the meeting, but the appeal of the President to the audience to retain their places, restored order, and the reading of the lecture was completed, after which the meeting adjourned.

THE AFTERNOON SESSION

did not begin till half an hour after the time appointed, on account of the conflagration then raging in the lower part of the city.

Mr. Charles Hutchins of the Dwight School, Boston, delivered an address on *The Parent Side in the Work of Education; or, Some of the Privileges and Duties of Parents with reference to the School.* He spoke of physical, mental, and moral education, and touched many points too much disregarded at present.

The President then announced the subject for discussion:

"Was the Massachusetts Educational Legislation of 1859 Expedient?"

Hon. George S. Boutwell, Secretary of the Board of Education, mentioned the acts relating to education, passed this year, stated the reasons which made such legislation necessary, and closed by showing that all these acts prove that the members of the last legislature were actuated by liberal views, and a sincere desire to promote the great work of education.

Hon. Anson Smyth, Commissioner of Schools in Ohio, said, that six years ago a law was passed in Ohio, by which all the small districts were abolished, and all the schools of each town were placed under the entire control of the town Board of Education. The taxes are now equally distributed through the townships, and poorer districts of a town are supported by richer ones of the place. The agitation which followed this act of the legislature is now entirely subdued, and no intelligent friend of schools desires a restoration of the old system. The present system is more expensive than the old one, because we now have better teachers, and increased means of procuring them. Formerly, many an obscure little district was even unwilling to pay what it could, and obtained teachers whose labors were hardly worth the board which they received. Now the salaries of teachers have been doubled, while the usefulness of schools has been increased tenfold.

James B. Congdon, Esq., of New Bedford, gave the experience of New Bedford in relation to the same matter, and said that everything in these schools worthy of preservation, could be dated from the time of the abolishment of the district system.

The President said, that if there were present any members of that convention which was organized with a view to oppose the law, or others who were of different opinion, he hoped they would come forward and state their views.

There was no response in opposition.

Mr. Leander Wetherell of Boston, confirmed the wisdom of the legislation, by results that he had witnessed from a similar change, in the city of Rochester, N. Y.

On motion, the question was laid on the table, and that of the use of the Bible in Public Schools was taken up.

Rev. B. G. Northorp defined his views more distinctly, as being opposed to a law which would require *all* scholars to use the Bible. The Bible ought not to be removed from our schools, because it is the only basis of morality, and—to use the words of Webster—any moral instruction which does not rest upon the Bible, is an edifice upon the sand. Again, there are many families, where no Scriptures are read, nor any religious instruction is given. There are Churches without Sunday schools; and there are large numbers of parents and children who attend neither public worship nor Sabbath schools. The people are not prepared to give up the use of the Bible in our schools. The importance of moral teaching by example and precept cannot easily be overrated, but the latter must be based upon the authoritative word of revelation.

Rev. Dr. Nelson, President of the College at Annapolis, Md., considered a popular assembly like this not as the place where a question so profound in its nature, and so delicate in its bearings, could be definitely settled. Practical, truly Christian morality in our schools will not be objected to by anybody, all the trouble arises from religious or doctrinal teaching. Positive Christianity has a deeper foundation than the fluctuating forms of political government. No compulsion ought to be practiced.

Mr. Increase Smith of Dorchester, said that our constitution ignores the union of Church and State, and explicitly declares that no religious test whatever shall be required for office. In Massachusetts, our Bill of Rights entitled and obliged the General Court to compel people to make a profession for public worship and contribute to its support. These and other restrictions have been abolished; up to 1855 the advance has been from intolerance to toleration. But the act of the Legislature in 1855, which requires the reading of the Bible in the common version in all the schools of the State, was a step backward. It was passed for the purpose of bringing a stronger Protestant influence to bear upon the Catholic children.

Again, our constitution declares that no preference shall be given to any sect or religious denomination in the State, and yet the Protestant translation of the Bible is made the only one which lawfully can be used in schools. This is also a question of power between Protestants and Catholics. It has been said that the latter are not honest in their pretensions of conscientious scruples, and that their only wish is to obtain power. Let this be granted for the sake of argument. How shall we resist them in wrongful claims, if we do not grant them their rightful ones? The pyramid of power stands firmest on its broadest base of truth and right.

On motion, the question was laid on the table, and the Institute adjourned.

The evening meeting was held in the North Christian Church, which, though the largest in the city, in spite of the unfavorable weather, was so crowded that extra seats had to be brought in.

The choir, under the direction of Mr. A. T. Thorup, Mr. James Herney presiding at the organ, commenced the exercises by singing an anthem, after which the audience was addressed by Rev. R. C. Waterston of Boston, on the subject of:

"The Beautiful in Nature and Art as connected with Education." Adjourned.

THIRD DAY. THURSDAY.

After prayer, and the reading of the report of yesterday's proceedings, the Committee on Nomination of Officers made their report. The following gentlemen were proposed and subsequently elected as officers for the next year.

President — D. B. Hagar, Jamaica Plain.

Vice-Presidents — Samuel Pettes, Roxbury; Barnas Sears, Providence, R. I.; Gideon F. Thayer, Boston; Benjamin Greenleaf, Bradford; Daniel Kimball, Needham; William Russell, Lancaster; Henry Barnard, Madison, Wis.; William H. Wells, Chicago, Ill.; Dyer H. Sanborn, Hopkinton, N. H.; Alfred Greenleaf, Brooklyn, N. Y.; William D. Swan, Boston; Charles Northend, New Britain, Conn.; Samuel S. Greene, Providence, R. I.; Ariel Parish, Springfield; Leander Wetherell, Boston; Geo. B. Emerson, Boston; Daniel Leach, Providence, R. I.; Amos Perry, Providence, R. I.; Nathan Hedges, Newark, N. J.; Wm. J. Adams, Boston; Worthington Hooker, New Haven, Conn.; Zalmon Richards, Washington, D. C.; John W. Bulkley, Brooklyn, N. Y.; Thomas Sherwin, Boston; Jacob Batchelder, Salem; Elbridge Smith, Norwich, Conn.; George S. Boutwell, Groton; John Kingsbury, Providence, R. I.; George Allen, Jr., Boston; Charles Hammond, Groton; D. N. Camp, New Britain, Conn.; J. D. Philbrick, Boston; Joshua Bates, Boston; Anson Smyth, Columbus, Ohio; Alpheus Crosby, Salem; Ebenezer Hervey, New Bedford.

Recording Secretary — B. W. Putnam, Boston.

Corresponding Secretaries — A. M. Gay, Charlestown; John Kneeland, Roxbury.

Treasurer — Wm. D. Ticknor, Boston.

Curators — Nathan Metcalf, Boston; Samuel Swan, Boston; J. E. Horr, Brookline.

Censors — William T. Adams, Boston; Jas. A. Page, Boston; William E. Sheldon, West Newton.

Counsellors — Daniel Mansfield, Cambridge; A. A. Gamwell, Providence, R. I.; Chas. Hutchins, Boston; J. W. Allen, Norwich, Conn.; A. P. Stone, Plymouth; Geo. N. Bigelow, Framingham; Richard Edwards, St. Louis, Mo.; Zuinglius Grover, Chicago, Ill.; T. W. Valentine, Brooklyn, N. Y.; J. E. Littlefield, Bangor, Me.; F. A. Sawyer, Charleston, S. C.; Moses T. Brown, Toledo, Ohio.

George B. Emerson, LL. D., in behalf of the Committee appointed yesterday to express the emotions of the Institute in relation to the death of Horace Mann, then offered the following resolutions:

Resolved, That the members of this Institute have heard with profound sorrow of the death of the Hon. Horace Mann; and that, while we bow submissively before the act of God's Providence whereby he is suddenly removed, and his face is hidden from us forever on earth, we desire to bless God for his great and signal gifts to our lamented friend;

For the elevation and purity, the disinterestedness and self-sacrifice, the earnestness and devotion of his character;

For that heroic unselfishness which enabled him to surrender, without a pang, the prospect of wealth, of fame, of power, of ease, of whatever is wont to be most coveted by men, and embrace, in their stead, unceasing and unrequited labor and undeserved opposition, with constant and wearing anxieties, from a sublime sentiment of duty;

For his deep-tested and heartfelt sympathy for the miserable, for those who have lost the guidance of reason, and for the victims, everywhere, of oppression, injustice, wrong, ignorance, and sin;

For that martyr-like spirit, which led him to consecrate all his powers and attainments, heartily and wholly, to the advancement of knowledge, virtue, truth, and obedience of God's laws;

For the large and lofty idea he gave us of what true education is; for what he did to show the infinite capacities of man, and that the whole of our nature should be educated, to awaken in the soul the hope of immortality and the conviction of accountability, and to establish the supremacy of conscience and of that spiritual capacity for adoration and worship which enables the child to hold communion with the Infinite Father;

For his power in depicting the immeasurable evils of intemperance and of every transgression of God's laws, and the example he gave of temperance and obedience; and

For the unqualified logic and glowing eloquence with which he enlightened public opinion, defended the sacred authority of law, and demonstrated the indispensable necessity of universal education to a Free State;

Resolved, That a debt of undying gratitude is due from us, as teachers, to the memory of the man who has done so much — more, perhaps, than any one else — to show the inherent dignity and nobleness of the work of the Teacher, to prove his right to the highest and broadest education, and to provide the means by which such an education can be obtained;

Resolved, That we feel the warmest sympathy for the family and immediate friends of Mr. Mann, and most respectfully ask leave to offer them this expression, though poor and inadequate, of our sense of the great loss which both they and we have sustained.

Mr. Emerson spoke with much feeling and warmth of the character and deeds of Horace Mann. He continued :

And what elevation of *moral* views! How eloquent is his inculcation of the necessity of educating the moral nature and making the love of truth and justice supreme! A love of truth, he says, "is the pool of a moral Bethesda, whose waters have a miraculous healing." The holiest duty of the mother, he urged, is to educate the conscience of her child.

His purity of thought and character was remarkable. No one ever suspected him of indolence or self-indulgence, of any violation of temperance or purity, or of anything else mean or degrading.

His sentiment of justice was delicate and noble. He was unjust only to himself. His habits were of extreme self-denial, even in common and slight things. He never bought even a book which he could do without. He saved for himself that he might do good to others; and so, by his example, put to shame the poor, low spirit of our age in regard to wealth, and showed how worthless and debasing it is, except when it is nobly used.

Who in our time, except Miss Dix, has done so much for others? Every school house in Massachusetts is better constructed — every child is better educated — every teacher occupies a higher position here to-day, by reason of what Horace Mann has done. The value of good books, the importance of well furnished libraries, the sacred responsibilities of the American citizen, the duty of caring diligently for the body as well as the mind; all these matters are more clearly understood, and the popular mind and conscience are more widely awake in relation to them, because Horace Mann has lived.

No one else has done so much to elevate towards its proper position the profession of the teacher, and to show its nobleness and dignity, or has so clearly and broadly laid open the whole field of the teacher's labors, or so raised the standard to which the teacher should aspire. His lectures on Education are the richest mine of wisdom on that subject in the language.

Hon. Thomas Sherwin, Principal of the English High School, Boston, said: When a great man dies, a renowned warrior, or one simply intellectually great, we recount his merits and extol him for what he did and said. If he has merely occupied a high station of trust and honor, we pay respect to the incumbent of the office, if not to the man. But when a man, not only intellectually great, but eminently efficient, eminently successful, eminently philanthropic, is removed from his seat of labors and usefulness, we should be recreant to humanity and the best impulses of our nature, if we did not mourn his loss, and in some degree recount his virtues. Massachusetts and every one of her teachers, pupils, and friends of humanity, owes him a debt of gratitude.

Hon. G. F. Thayer of Boston, as one of those who had stood "shoulder to shoulder" with our lamented friend, seconded the adoption of the resolution with deeply felt and valuable remarks.

Mr. Increase Smith of Dorchester, moved, that when the vote was taken, it be taken by the audience rising in silence, each one uttering a silent prayer that he might be able to go and do likewise.

Further remarks were made by Rev. R. C. Waterston, Rev. B. G. Northrop, Mr. Perry of Providence, and Mr. Greenleaf of Brooklyn, after which the resolutions were adopted unanimously by a rising vote.

A piece of music was then performed by Mr. Thatcher and several young ladies.

The exercises in the forenoon were concluded with a lecture by C. Northend of New Britain, on "*Primary Schools*."

AFTERNOON SESSION.

Mr. Sheldon of West Newton, offered the following resolutions:

Whereas, God, in his providence, has removed by death Dr. William A. Alcott, a member of this Institute, therefore,

Resolved, That in this bereavement this Institute has lost one of its earliest friends and most devoted members.

Resolved, That in Dr. Alcott, the cause of popular education had one of the most intelligent, devoted, and self-sacrificing laborers of the day; and while, with a diligent hand, he sowed the seeds of knowledge and virtue, he lived to reap a golden harvest in the dissemination of sound principles and an enlightened public sentiment.

Resolved, That we sympathize with the family of our deceased friend and brother and pray that our Heavenly Father may be husband of the widow, and the father of the fatherless.

Resolved, That the Secretary of the Institute be requested to transmit a certified copy of these resolutions, to the family of the deceased.

Mr. J. W. Bulkley of Brookline, seconded these resolutions, which were adopted unanimously.

Similar resolutions were passed in memory of the late Professor Denison Olmstead, LL. D.

The Treasurer's report was presented and accepted.

In place of Prof. J. W. Patterson of Dartmouth College, who was prevented from attendance, Prof. E. D. Sanborn of Washington University, St. Louis, delivered an address upon "*Aids in the Study of the Classics.*"

Hon. Anson Smyth, School Commissioner of Ohio, was called upon to give some information of the Schools in his State. He answered to the call by a highly interesting speech. I believe, said he, that our school system is as good as that of any other State in the Union, and in some points in advance of all sister States, though I am far from believing that our schools or teachers, as a general thing, are as good as those here. We live in a great State with eighty-eight counties; we count the inhabitants by millions, and have 22,000 teachers. Our schools cost nearly four million of dollars a year, which money is raised, to the greater part, by direct taxation. Our school fund amounts to only \$2,500,000. Our school libraries are growing in size and usefulness, and are supported by a general taxation. Mr. Smyth closed his remarks by exhibiting some specimen copies for library books, and by presenting some of them to Messrs. Philbrick, Boutwell, Hagar, and Northend.

After some other business of a miscellaneous character, the meeting adjourned.

EVENING SESSION. CLOSING EXERCISES.

The Institute met again in the North Christian Church, which was crowded. The meeting was called to order by the President, Mr. Hagar, at 8 o'clock, after which the choir executed the chorus "The Heavens are telling," from Haydn's Creation, in fine style. The President then made some introductory remarks, and said he had hoped to be able to introduce Hon. Henry Barnard from Wisconsin, to the audience. Unfortunately, this gentleman is detained.

Prof. Butler of Madison, Wis., was then introduced as a most excellent substitute. This gentleman answered to the call by reciting a humorous poem. He said that he had lived in the West for the last seven years, which he reckoned about half his life, the remaining seven years he had lived in New England. Wisconsin is a State longer than Old England, but a little smaller than New England, with 267,000 children of school age. She wants good teachers, and offers them good wages. Although the State is only eleven years old, the Teachers' Association has held, already, seven annual meetings. Prof. B. referred to a visit which he had recently made in Danvers, where he called on Ma'am Eden, who was upward of ninety years of age. Conversing with her he learned that she had never been in Boston, and that the farthest place from home to which she had travelled, was Marblehead, a distance of five miles. She went there before the revolutionary war, to be vaccinated. Prof. B. thought that, great as the contrast was between Ma'am Eden and the present female teacher who had travelled least, it was not greater than it would be between that same teacher now, and what she would be when he should meet her next in Wisconsin. He closed by giving this sentiment: "*The East and the West, may it remain forever doubtful which owes most to the other.*"

Mr. James Cruikshank of Albany, Editor of the "New York Teacher," responded for the State of New York. He spoke of the great influence which the meetings of the American Institute had exerted. There were now State Teachers' Associa-

tions in all Northern, most of the Western, and some of the Southern States. He then alluded to the National Teachers' Association, and closed with some remarks regarding the schools in his State.

Mr. Nathan Hedges of Newark, spoke for New Jersey, which, during the revolutionary time was in the Union, but which now, according to a New York discovery, is in the State of Camden and Amboy. New Jersey has for the foundation of her educational system, a Normal School, and connected with it a Model School, which will not suffer in comparison with any in the United States. We have a Preparatory School established at great expense, for those who will later enter the Normal School, and our school-houses and teachers' salaries will compare favorably with those of Massachusetts.

Mr. Northend of New Britain, made some remarks with regard to the Schools in Connecticut. The school system, he said, was not free. Their large school fund gives to the education of every child between four and sixteen years of age, the sum of \$1.40 annually. The people have depended too much on this fund. The "Rate Bill System" is still found in many districts. Within a few years, about five hundred libraries have been formed. The State gives ten dollars to every district that will raise an equal amount for that purpose. It is a pity, said Mr. N., that the teachers in Connecticut, as in other States, do not interest themselves in educational journals; not more than one fourth of them take any journal whatever.

Mr. B. Snow of Providence, made some statements about the schools in his city.

Mr. A. P. Stone of Plymouth, spoke for Massachusetts. Her record on the subject of education is good from the beginning to the present time. Having mentioned some schoolmaster incidents which had happened in the early days of the settlers of Plymouth Colony, he alluded to the legislation of this year with regard to schools, and closed by speaking of the prosperous condition of the Teachers' County Associations, the State Association, and this full meeting.

Mr. Charles Anson of Dorchester, formerly a teacher in Prussia, was called upon. He said: The schools in Germany, and especially Prussia, are good — relatively, not absolutely. The difference between schools in the country and those in the cities, is as great there as it is with us. To judge of Prussian schools after an inspection of the institutions of learning at Berlin, Halle, or Breslau, is as partial, as to take the Boston schools for the average standard of the schools of our State. There, the higher schools are supported entirely or mainly by government, while the expenses of the common schools are laid upon the shoulders of the common people, who have to pay, not according to their property, but to the number of children they send to school. The school laws of Prussia are a perfect Babel, patchwork from the first to the last. They are administered by provincial, gubernatorial or county officers, every one of whom expounds or modifies them according to his views or to circumstances. With us, the schools of different grades are regarded as sister institutions; and the primary school teacher shakes hand with the professor at the university; while in Germany, the common school is regarded by the university and college, as the publican was by the pharisee. The absolute Eagle of Prussia has favored and cared for common schools merely from a sense of self-preservation. These schools were improving from 1808 to 1840, since that time they have been declining. Normal schools have been removed from large

cities to small country towns; experienced educators, like Dr. Diesterweg, G. Scholtz, Meyer, and others, were dismissed from Normal schools, and their places filled by inexperienced and inferior clergymen; the press suffers under the system of censorship, and the number of educational periodicals has declined within the last ten years about 66 per cent. Teachers' meetings are forbidden, unless a clergyman is in the midst of them. The Jews could not long more earnestly for deliverance from captivity, than the enlightened Prussian teacher longs for better days.

Mr. Stone of Woburn, gave an interesting account of the recent meeting of the Vermont Teachers' Association.

G. F. Thayer, Esq., of Boston, addressed the female teachers, showing the difference between two school ma'ams, Mary Cheerful Method and Jerusha Fussly Snarl.

The choir then sang another anthem, after which Mr. John Kneeland of Roxbury, offered the customary resolutions of thanks to the citizens of New Bedford, the railroad corporations, and others, which were passed unanimously.

Hon. Thomas D. Eliot of New Bedford, expressed his entire satisfaction with the results of this meeting, and hoped it would not be needful to wait thirty years before repeating its visits to this city. Complaints had been made that the business of teaching was not yet a fixed profession. A young woman fresh from school, and the young man with his diploma still damp, who enters the school room to teach for a short time only, cannot maintain the rank of teaching as a profession as it should be. Teaching ought to be a business for life. There are considerations with the ladies which take that matter out of their control; they are beset behind and before, and the more successful they are in the school room, the more they are sought in the nursery. Through no fault of theirs, they must change their places, but continue teachers nevertheless. But for men it is time to take rank among other professions.

The President heartily congratulated the Institute on the success of the present meeting, and expressed the hope that for many years they might be permitted to meet again.

The whole audience united in singing—"Be thou, O God, exalted high," and then, at 11 o'clock, the meeting was adjourned *sine die*.

FRIDAY FORENOON.

The kindness and attentions of the citizens of New Bedford to the members of the Institute were manifested in a most gratifying manner, by the opportunity which was given to a large company—as many as could conveniently remain to enjoy it—to take a most pleasant excursion down the bay on the steamer Eagle's Wing. The number on board was not far from eight hundred, who had no excuse for want of sociability. All enjoyed the trip exceedingly, except a few who became sick as the boat approached Gay Head, in consequence of which the trip in that direction was suspended, and turning along the shore of Naushon, and passing to the eastern extremity, the party were permitted to land and take a stroll over the beach and upon the island, extending their walk in some cases as far as the Mansion, now owned by J. M. Forbes, Esq., of Boston.

At half past twelve the signal for departure from the island was given, but before

all the wanderers were collected it was repeated again and again, so that no one of the large company might be left on this interesting but rather lonely island. The last slow moving couple pass the plank, the wheels begin to turn, the rope is thrown aboard, and we commence our journey direct for the city.

On the way, a meeting of the passengers was called, and Mr. Bulkley of Brooklyn, called to the chair, who stated the object of the meeting to be to make an expression of the feelings of those present towards those who had provided the excursion.

Mr. Kneeland of Roxbury, was appointed Secretary.

Mr. Stone, of Plymouth, offered resolutions tendering hearty thanks to the Committee of Arrangements and all other persons and parties to whom the members of the Institute were indebted for the excursion and its pleasures.

The resolutions were unanimously adopted.

A scene of great merriment followed. Remarks were made By Messrs. Stone, Hagar, Butler, Barker, of N. B., Putnam, Professor Sanborn, Rev. M. Parker, and J. B. Congdon, which kept the audience in a roar of laughter, and added highly to the enjoyment of the trip. The boat reached the wharf at two o'clock.

INTELLIGENCE.

A NEW High School house has been built at Newton, which was dedicated with appropriate exercises on September 5th. The house is 59×40 feet, two stories high, and is surrounded by an iron fence, with a large area in front, which will be ornamented by the citizens of Newtonville. — The new town library in Fitchburgh is to be opened to the public about the middle of this month. It will start with a collection of nearly 3,400 volumes, obtained from various sources, and of a miscellaneous and valuable character. The library occupies the rooms of the old Athenæum library, which has been purchased by the town. — The demand for graduates from the Normal Schools seems to be on the increase. The town of Dennis applied recently to the Principal of the Bridgewater school for seven teachers. All the gentlemen who graduated this summer at this Normal School have obtained situations.

NEW YORK CITY.—This Board of Education passed a regulation, in June last, intending to compel the reading of the Bible in all the public schools of the city. The local school boards in each of the wards, however, assume the control of this matter, and as they can discharge a teacher at their option, the action of the former is of little avail. The schools have recommenced recently, and in the three non-Bible-reading wards, with a single exception, no attention was paid to the June action of the Board.

The Trustees of Antioch College, Yellow Springs, O., have unanimously elected Rev. Thomas Hill, of Waltham, Mass., President, in place of the late Horace Mann. Mr. Hill graduated at Cambridge, with the first honors, in 1843, and settled as pastor in 1847. When the directorship of the Washington Observatory was offered to him, he replied, that he would sooner be the pastor of the humblest country parish, than hold any merely scientific post in the land. He has been

called since, formally or informally, to a professorship in the Smithsonian Institute, to the presidency of the Meadville School, to the head of the Normal School at Framingham, to a professorship in Minnesota, and has been the favorite candidate with many for the presidency of Harvard University, if the threatened resignation of Dr. Walker should occur. — The removal of the body of Horace Mann will take place in a few weeks. Mr. Mann, in his last sickness, expressed a wish to be buried by the side of his first wife. Mrs. Mann is interred in the North Burial-Ground of Providence, with her father, Rev. Dr. Messer.

MISSOURI.—Miss Charless, daughter of the lately murdered Joseph Charless of St. Louis, has given \$20,000 to endow the Professorship of Physical Science in Westminster College, Fulton, Mo. Her father had expressed especial interest in that object.

THE ALABAMA EDUCATIONAL ASSOCIATION held its fourth annual meeting at Marion, Perry County. The result does not appear to have been satisfactory. The Resident Editor of the Alabama *Educational Journal* speaks thus of the teachers of his State:

"Yet how little, as our readers too well know, has been done in this Journal! How few have lent us their pens, and unfolded their experiences and aided their fellows by instruction and encouragement! Indeed, many of the most prominent Educators in the State have withheld from its support the miserable pittance of a dollar, seeming willing that the honest and disinterested effort of a few to elevate the profession and do a general good, should die of mere starvation. But we highly hoped that the 19th of June would redeem all. Mark the result. Not one-fourth of the Committees appointed to investigate and introduce important topics, had prepared any reports whatever; many were absent. Not one-fourth of those who had been appointed and consented to address the assembled teachers, appointed because of their capacity to instruct their expectant hearers, presented themselves, nor offered an excuse. Places were simply vacant. No letter of apology, no word of encouragement came up to us.

"The few present consisted of two classes. Those whose liberal views and devotion to the general interests of the cause would have carried them any where to strike a blow for its good, who had put their shoulders to the wheels and were resolved not to look back; and, on the other hand, those who had been persuaded by the others to come up and help, who for the first time came forward inquiringly to look into and take part in these good movements. The first class came away profoundly discouraged and weakened; the second returned home, some not waiting for the close, offended that they had been dragged through sun and rain to attend to such trifling. Now here having failed of a good, a great evil has been done. Let each one ask himself how far he is individually responsible for a share of this. Moreover, let him repent."

THE Legislature of Iowa has passed a law authorizing the establishment of a State institution for the practical education of the youth in all the sciences and branches pertaining to husbandry. A piece of land containing six hundred and fifty acres has been chosen, and the erection of a building will soon take place. This college will probably be opened in the fall of 1860, when from fifty to seventy-five students will be admitted. The Board has established already four Professorships, one of Physics, one of Mathematics, one of Zoölogy, and one of Botany.

The citizens of Tennessee have subscribed \$300,000 towards the proposed new University of the South.

INDIANA.—John H. Lathrop, late Chancellor of the University of Wisconsin, has been elected Chancellor of the Indiana University, and has already removed from Madison to Bloomington. The number of students at the University at Bloomington, during the last year, has been two hundred and thirty-four. The board of instruction consists of seven professors and two tutors, who are not only subscribers of, but also contributors to the *Indiana School Journal*. The Supreme Court of this State has recently decided that the public schools of the State must derive their support wholly from the school fund and a general State tax. Cities and towns cannot now appropriate the necessary amounts, and the legislature will not, so that the school system at present is brought to a stand.

THE ILLINOIS TEACHER contains the following article :

"We notice that the Board of Education in Chicago have established a scale of salaries in which, while apologizing for doing such a thing, they fix the salaries of new female teachers at \$250 per annum. Most *liberal* provision! In the country, where the cost of living is low, we can imagine situations where \$250 would be abundant compensation; but how the Board of Chicago could leave *so wide* a margin for the purchase of clothing, books, and little comforts, after board-bills are paid, in a city where four dollars a week will be a low rate for a decent room and enough of good food, passes our comprehension. Ladies, come to your important mission! The leading city of Illinois offers you *fifty dollars* a year to dress suitably and take educational periodicals, if you will train mind in her schools!! Your salaries will be increased if you remain more than a term, and you can become rich by laying up the increase. To be sure, you can earn only half as much as by doing domestic work; but the *glory* of educating immortal mind will amply make up the difference. How *could* the Board of Education hold out such an inducement to fortune-hunting 'fast' men as to bestow such sums on marriageable ladies! Bachelor teachers, if you want rich wives, look hereafter in the Chicago schools for them."

PHILADELPHIA. Some excitement has been created recently by the action of the Board of School Directors in discharging five primary school teachers very unexpectedly. The ladies are Catholics, and it is alleged that this is the cause of their dismissal. The committee found it impossible to instal the newly elected teachers, and two of the schools were closed. Handbills were posted calling upon the citizens to attend the meeting of the School Board, but with what result does not appear. At the meeting the committees of the different schools reported their inability to oust the teachers, and a resolution was adopted authorizing the committee to re-open the schools on Monday next, and in case of any interference on the part of the expelled teachers, to have warrants issued for their arrest.

Mr. Leslie, formerly employed in the Patent Office at Washington, succeeded by means of advertising, in getting together fifteen ladies, who were to go south as teachers in private families. He proceeded with them to New York, put up at a hotel, collected \$15. from each for their fare, told them when the steamer would start, and then cleared out. The ladies have since found their way home, and Mr. Leslie is in prison.

Mr. Emile de Fenouillet, Professor of History and of Literature, at Laval Normal School, (Lower Canada,) died on June 30th, aged 50 years. He was distinguished as a scholar, writer and teacher.

PERSONAL. Mr. Henry H. Babcock of Newton, has been elected Principal of the High School in Somerville; salary \$12,00. Mr. Joseph H. Noyes of Malden, is his successor. — Mr. John Wilson of Watertown, has become Principal of the Prescott Grammar School, Somerville, in place of Mr. D. D. Wheeler, who resigned. — Mr. Warren T. Copeland, assistant in the Normal School at Bridgewater, has been chosen teacher of the Union School at West Bridgewater.

✎ The next meeting of the Massachusetts Teachers' Association will be held at Newburyport, on Monday and Tuesday of Thanksgiving week. The Programme of Exercises will be given in our next number.

BOOK NOTICES.

CONTRIBUTIONS TO THE HISTORY AND IMPROVEMENT OF THE GERMAN UNIVERSITIES. By Karl von Raumer. Reprinted from the *American Journal of Education*. Edited by Henry Barnard, LL. D., Chancellor of the University of Wisconsin. New York: published by F. C. Brownell, No. 12 Appleton's Building. 1859.

Hon. H. Barnard deserves, and we hope will receive, the thanks of all scholars who are interested in the origin and history of the seats of learning in Germany, for republishing this excellent work in one volume. Its index was published in the columns of our advertisements of the September number. The author's fame is not limited to Germany, and his veracity undoubted by every one who knows his character. The work was translated by Mr. Frederic B. Perkins, Librarian of the Connecticut Historical Society.

A NATURAL PHILOSOPHY, embracing the most recent Discoveries in the various Branches of Physics, and exhibiting the Application of Scientific Principles in Every-Day Life. By G. P. Quackenbos, A. M. New York: D. Appleton & Co. 1859.

A cursory examination leads us to expect a work of much merit. The material is well arranged, and presented in the author's clear and terse style. 335 pictorial illustrations, which in many cases may serve as substitutes for an apparatus, adorn the book, and many historical facts, interwoven in the text, will make its contents more interesting. A chapter on Astronomy and one on Meteorology conclude the book of 450 pages. Some of the recent discoveries and historical facts are presented, and the author intends "to keep his book up to the times by constant revision, and to make such alterations and additions as the progress of discovery may require."

RICHARDSON'S NEW METHOD FOR THE PIANO-FORTE. An Improvement upon all other Instruction Books, in ADAPTATION, CLASSIFICATION, PROGRESSION, AND FACILITY OF COMPREHENSION; Founded upon a new and Original Plan. By NATHAN RICHARDSON. Boston: OLIVER DITSON & Co., 277 Washington St.

Richardson's New Method for the Piano-Forte, is a new book, superior to his "Modern School" in matter and method. Whoever possesses the requisite musical

talent, and can devote sufficient time and effort to Piano-Forte playing, cannot fail to become a good performer by using and following strictly this guide.

We should hesitate, however, to recommend this work as the only or even the principal guide in Piano-Forte playing to those who are not able to give about one-fifth of their youthful years to practising on the Piano. Perhaps fifty per cent. of all who take lessons on this favorite instrument, are not able to give much more than an hour a day to the practice and study of Music. Such scholars, if they continue a regular course for some years, may acquire enough skill in execution, and sufficient insight into the Theory of Music, to derive a great deal of pleasure from this source during their years of maturity and old age.

This work does not profess to be a Method for the Piano-Forte "without a Master," and the omission of what we consider an essential part of a good "Method" need not necessarily be a fault of the book. We refer to the reasons for the rules or directions. All would be right if in any part of the book the hint had been thrown out, that for further explanation the pupil should rely on the teacher. But we do not remember to have met such a remark. Now, a school book on Arithmetic or Natural Philosophy which should give the rule without a sufficient explanation, and then the examples or experiments to be worked out, would not promote a harmonious development of the mental powers, and hardly receive a general recommendation. Playing on the Piano-Forte without some insight in the Philosophy of Music is, after all, dry work, more or less, mere mechanical performance. Outward stimulants may induce the player to perform the toil of mechanical practice, but the stimulus of a clear insight will be wanting.

We have no reason to suppose that the author intended to place his New Method into the hands of young beginners. For children under nine years of age the book presents too much, progresses too fast, explains too little, and gives not enough exercises on the instrument. On the tenth page, for instance, two A minor scales are presented, in both of which occurs G sharp; while on the eleventh page the A minor key is put down as having neither sharp nor flat, and as being a relative of C major. A better place for giving information about triplets would have been on the top of page 10, at the end of the chapter which relates to time. It was a happy thought to divide the matter into Exercises, Studies, and Amusements, and the care taken to arrange these in proper order, cannot be overlooked or undervalued. But, on the other hand, there is no close connection between the five finger exercises and the studies which are given in connection with the scales.

The "Illustrated Positions of the Hands" are valuable plates; and the issue of two different editions, one with American fingering, the other with foreign, must have caused considerable additional expense, for which outlay the Publishers deserve to be compensated by a large sale of the work.

We have received, and shall review in our next number:

MORAL PHILOSOPHY, INCLUDING THEOLOGICAL AND PRACTICAL ETHICS. By JOSEPH HANEN, D. D. Boston: GOULD & LINCOLN, 59 Washington St. 1859.